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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/024,690 | 12/14/2001 | Toshiaki Iwafuchi | 0112857-306 | 2929 |
| 29175 | 7590 | 10/28/2003 | | |
| BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135 | | | | |
| EXAMINER EVERHART, CARIDAD | | | | |
| ART UNIT | | | PAPER NUMBER | |
| 2825 | | | | |

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,690

Applicant(s)

IWAFUCHI ET AL.

Examiner

Caridad M. Everhart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,11,12 and 14-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-53 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,9,11,12 and 14 is/are rejected.
- 7) ☒ Claim(s) 2 and 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Response to Arguments

Applicant has pointed out that Buchwalter does not qualify as 102(b) prior art. Any inconvenience caused by the inadvertent application of 102(b) rather than 102(e) is regretted. With respect to applicant's response that the translation of applicant's priority document would perfect the priority date of applicant's foreign priority document, Buchwalter is relied upon below until the translation is received. Newly found prior art is also applied below. With respect to the Chiu and the Hatanaka references, applicant has not argued reasons why they do not teach or suggest elements of the claims to which they are applied, other than that because the reference with which they are combined, Buchwalter, is alleged to not be a proper reference because of the priority document. Therefore, Chiu and Hatanaka are also applied in the following rejections.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

Claims 1, 3, 4, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Buchwalter et al. ("Buchwalter")(US 2002/0078559A1).

Buchwalter discloses the steps of selectively irradiation of a release layer (paragraph 0053) in order to release a layer from a temporary substrate. The device of the layer which is released is transferred to another substrate from a transfer substrate(paragraphs 0055,0058, and 0059). The device comprises an optical device (paragraphs 0005 and 0037). There may be an adhesive layer (paragraph 0053) and the release step comprises laser ablation(paragraph 0053).

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Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Park, et al ("Park")(US 2002/0082543A1).

Park discloses a substrate (paragraph 0108), a silicone layer (paragraph 0108), and microneedles which fit in the openings in the silicone layer (paragraph 0108). Fig. 4 shows that the devices are pointed.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tuominen, et al("Tuominen")(US 2002/0055239A1).

Tuominen discloses a substrate(paragraph 0038) which may be for example a semiconductor(paragraph 0039), a polymer layer is coated on the substrate (paragraph 0041) which coating polymer material may be silicone(paragraphs 0054 or 0076), and nanoscale devices in openings in the polymer layer(paragraph 0063). Although pointed is not specifically taught, Tuominen does disclose that the shape may be various shapes and that the cross-section can be varied (paragraph 0017). Therefore, one of ordinary skill in the art would have found it obvious to apply the device taught by Tuominen to a pointed nanodevice.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchwalter in view of Chiu et al ("Chiu")(US 5,929,962) and further in view of Hatanaka et al ("Hatanaka")(US 4,451,634).

Buchwalter does not teach silicon, although Buchwalter does teach adhesive(paragraph 0053).

Chiu discloses a UV curable adhesive which can later be laser ablated in the separation of substrate layers(col. 4, lines 33-44 and 60-65 and col. 5, lines

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42-50 and 58-64). Hatanaka discloses a UV curable silicone adhesive which can be used in semiconductor processes (col. 1, lines 5-8; col. 2, lines 13-16; and col. 5, lines 1-3).

In view of the disclosure by Chiu that UV curable adhesive can be laser ablated, in a similar process as that taught by Buchwalter, and of Hatanaka of a UV curable silicone which can be used as adhesives in semiconductor processing as well as other substrates, one of ordinary skill in the art would have found it obvious to have used silicone UV curable adhesive in the process taught by Buchwalter because Chiu teaches this material would be laser ablatable in a similar process.

Allowable Subject Matter

Claim 15-53 allowed.

Claims 2 and 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 703-308-3455. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is

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number is 703-308-3455. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
October 27, 2003